federal register

THURSDAY, OCTOBER 13, 1977

PART II

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

■

CIVIL SUPERSONIC AIRPLANES

Proposed Noise and Sonic Boom Requirements

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[14 CFR Parts 21, 36, and 91]

[Docket No. 15376; Notice No. 77-23]

CIVIL SUPERSONIC AIRPLANES

Proposed Noise and Sonic Boom Requirements

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (NPRM), and reopening of comment periods.

SUMMARY: This NPRM supplements FAA's review of proposals for regulating the noise of civil supersonic airplanes (SSTs) submitted to the FAA by the U.S. Environmental Protection Agency (EPA) and previously published by the FAA pursuant to the Noise Control Act of 1972. These additional proposals would (1) require all SSTs except Concordes with flight time before January 1, 1980, to comply with the Stage 2 noise limits of Part 36 in order to operate in the United States; (2) prohibit modifications of current SST types that increase their noise; (3) place operational restrictions on SSTs that do not comply with the Stage 2 noise limits of Part 36; and (4) add procedures adapting the flight test conditions and noise limits of Part 36 to SSTs. A proposal to improve protection of the United States from sonic boom is also included. These proposals respond to the public need for the control of sonic boom and of the noise of SSTs.

DATES: Comments must be received on or before December 31, 1977. Public hearings will be held on dates to be announced later.

ADDRESS: Send comments on the proposals in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-24), Docket No. 15376, 800 Independence Avenue, SW., Washington, D.C. 20591.

FOR FURTHER INFORMATION CONTACT:

Mr. Richard Tedrick, Program Management Branch (AEQ-220), Environmental Technical and Regulatory Division, Office of Environmental Quality, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, D.C. 20591, telephone 202-755-9027.

SUPPLEMENTARY INFORMATION:

Public Hearings

Public hearings will be held on this rulemaking action. The details of the hearings will be outlined in a notice of public hearings to be published in the FEDERAL REGISTER. A draft environmental impact statement concerning the actions proposed in this NPRM will be available before the hearings.

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting written data, views, or arguments. Communications should identify the regulatory docket and notice number and be submitted in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket, AGC-24, 800 Independence Avenue, SW., Washington, D.C. 20591. Comments on the probable environmental, economic, and technological impacts of the proposals are specifically invited.

All communications received on or before the closing date of December 31, 1977, for comments will be considered by the Administrator before any action is taken on the proposed rules. The proposals contained in this notice may be changed in light of the comments received. All comments received, including comments received at the public hearing, will be available in the Rules Docket for examination by interested persons. A report summarizing each substantive public contact with DOT personnel concerned with this rule making will be filed in that Docket.

Re-opening of Comment Periods

To ensure coordinated review of comments in response to this notice in concert with review of comments concerning STT noise proposals previously submitted to FAA by EPA, the comment periods for Notice 75-15, published in the FEDERAL REGISTER (40 FR 14093) on March 28, 1975, and Notice 76-1, published in the FEDERAL REGISTER (41 FR 6270) on February 12, 1976, are hereby re-opened for additional public comment through the closing date for comments concerning this NPRM. Any additional comments should be sent to Docket No. 15376. Information copies of all public comments may be sent to: Environmental Protection Agency, Office of Noise Control Programs, AW-571, 401 M Street, SW., Washington, D.C. 20460.

Availability of NPRM

Any person may obtain a copy of this notice of proposed rule making (NPRM) by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Information Center, APA-430, 800 Independence Avenue, SW., Washington, D.C. 20591, or by calling (202) 426-8058. Communications should identify the notice number of this NPRM. Persons interested in being placed on a mailing list for future NPRMs should also request a copy of Advisory Circular No. 11-2 which describes the application procedure.

Discussion of Proposed Rules

I. SYNOPSIS

This NPRM contains proposed FAA actions that are being considered in addition to several options proposed to the FAA by the EPA for the purpose of regulating the noise of SSTs. The rules proposed in this NPRM would, if adopted, have the following effects:

1. The noise levels of the Concorde, which is the only SST for which application has been made for U.S. type certificate, would be limited to the minimum noise level that is technologically practicable and economically reasonable for that airplane type. Because there is no known technology which would reduce Concorde noise levels, the noise limit would, at this time, be the current noise levels of that airplane rather than the noise limits of Part 36 in effect on January 1, 1977 ("Stage 2 noise limits"). Any Concorde that had flight time before January 1, 1980, would be "grandfathered" for operation in the United States.

2. Except for the 16 Concordes expected to have flight time before January 1, 1970, all SSTs would have to comply with the Stage 2 noise limits of Part 36 in order to operate in the United States.

3. The noise test requirements and related flight test procedures of Part 36 (14 CFR Part 36) would be extended to SSTs.

4. The "acoustical change" concept of Part 36, which prohibits any design changes that increase the noise of subsonic airplanes that do not meet Stage 2, would be extended to the Concorde.

5. For SSTs that do not comply with the Stage 2 noise limits of Part 36, the scheduling of operations at U.S. airports between 10 p.m. to 7 a.m. local time would be prohibited.

6. The proposed rules would not in any way change the existing legal authority of each airport proprietor to regulate the noise at its airport in a manner which is not unjustly discriminatory and not unduly burdensome on commerce. For this reason, the proposed rules would not affect the question presently being litigated concerning whether the action of the Port Authority of New York and New Jersey in relation to the Concorde is unjustly discriminatory.

7. The operating restriction relating to sonic booms would be modified to assure that airplanes operating to or from U.S. airports do not, while operating outside U.S. airspace, produce sonic booms that reach land and waters in the United States.

II. PRIOR HISTORY

This supplemental notice relates to three prior notices of proposed rule making and to the demonstration of the Concorde at Dulles International Airport.

A. *Notice No. 70-33.* On August 4, 1970, the FAA issued Advance Notice of Proposed Rule Making No. 70-33, published in the FEDERAL REGISTER (35 FR 12555) on August 6, 1970. That notice initiated the public process of determining the nature and scope of the factors that must be considered in the development of noise ceilings for the SSTs. In that notice, the FAA requested public comment concerning several issues, including the extent to which noise standards and measurement procedures applicable to subsonic airplanes could be applied to SSTs; the extent to which SSTs should be divided into subclasses for the purpose of estab-

lishing noise ceilings and measurement concepts; the extent to which SSTs should be divided into subclasses for the purpose of assessing the economic impact and technological feasibility of proposed noise regulations; the extent to which the timing of type certification standards would itself affect the ability of the FAA to consider economic and technological factors; the manner in which the regulatory authority under section 611 of the Act may be optimally utilized with respect to SSTs without interfering with the existing legal authority of local airport proprietors to establish for their airports airplane noise requirements which are not unjustly discriminatory or unduly burdensome on commerce; the manner of insuring that noise limits established for type certification purposes will have maximum utility for the purposes of long-range airport development; and the development of economic incentives for reducing the noise levels of SSTs.

Notice No. 70–33 also stated FAA's intent to ensure that SSTs, like subsonic airplanes, are subject to type certification standards that require the application of all currently available noise reduction technology.

B. *Notice No. 75–15.* On February 27, 1975, EPA transmitted to FAA proposed regulations for the control and abatement of SST noise. These proposals were developed and submitted pursuant to section 611(c)(1) of the Act, as amended, which provides that EPA shall submit to the FAA proposed regulations to provide such control and abatement of aircraft noise and sonic boom as EPA determines is necessary to protect the public health and welfare, and that the FAA "shall consider such proposed regulations submitted by EPA and shall, within thirty days of its submission to the FAA, publish the proposed regulations in a notice of proposed rulemaking."

In accordance with this requirement, the FAA issued Notice No. 75–15 on March 25, 1975 (published in the FEDERAL REGISTER (40 FR 14093) on March 28, 1975), containing these EPA proposals. The FAA conducted public hearings on these EPA proposals in accordance with section 611(c)(1) in Los Angeles on May 16, 1975, and in Washington, D.C. on May 22, 1975.

The principal feature of the 1975 EPA proposal was the requirement that future design SSTs meet whatever noise level standards may be applicable to new type subsonic airplanes at the time an application for a type certificate is made.

As to existing types of supersonic airplanes (the Concorde and Russian TU–144), the EPA recommended two rules. First, airplanes upon which "substantive productive effort" had not commenced before the date of the EPA Notice would be obliged to meet the Stage 2 requirements of Part 36. The class of current SSTs already under production (at least nine, possibly sixteen, Concordes and an unknown number of TU–144s) was to be treated separately. The EPA did not, however, propose specific regulations for that class. Instead, the Notice proposed eight alternative regulatory strategies for existing SSTs.

These options are: (1) Ban all Concorde and TU–144 operations in the United States: (2) impose Part 36 standards on existing Corncordes and TU–144s exactly as they are imposed upon subsonic airplanes; (3) allow existing Concordes and TU–144s to operate at designated airports but impose certain restrictions on those operations; (4) allow market forces to determine which airports have service by Concordes and TU–144s and, as in option "3", impose restrictions on operations at those airports; (5) at SST airports (as determined in options "3" or "4"), impose certain operating restrictions on all operators, not only on Concorde and TU–144 operators; (6) impose increasingly stringent source noise requirements on existing SST's, beginning with currently projected noise levels, or best efforts, on the first 20 airplanes, and proceeding in steps to Part 36 Stage 2 noise limits after the first 60 airplanes; (7) no regulations on existing Concordes and TU–144s; and (8) delay the adoption of regulations for those SSTs until an airport noise regulation has been adopted.

C. *Notice No. 76–1.* On January 19, 1976, EPA submitted additional proposed regulatory language to FAA, which was published by the FAA as Notice No. 76–1 (41 FR 6070), on February 12, 1976. A public hearing was held by FAA on this proposal on April 5, 1976, in Washington, D.C. EPA indicated that this proposal represented "a further development of the EPA's position on proposed noise requirements for civil supersonic airplanes" and was "intended to supplement" Notice No. 75–15. The additional EPA proposal would prohibit any SST which does not have flight time before December 31, 1974, from operating to or from an airport in the United States unless it complies with the Part 36 noise.

D. *Concorde Demonstration Flights.* On application of British Airways and Air France to operate the Concorde into the United States, former Secretary of Transportation, William T. Coleman, Jr. issued a decision on February 4, 1976, establishing two 12-month demonstration periods for the Concorde, one at Dulles International Airport and one at John F. Kennedy International Airport, each followed by a 4-month evaluation period.

This decision was made following analysis of comments and testimony presented at a public hearing in Washington, D.C., on January 5, 1976. Public hearings were also held by the FAA in Washington, D.C., on April 14 and 15, 1975, in New York City on April 18, 19, and 24, 1975, and in Sterling Park, Virginia, on April 21, 1975, concerning the draft environmental impact statement prepared prior to the decision.

The decision, which was reaffirmed in 1977 by Secretary of Transportation Brock Adams, is set forth below so that its relation to the current rulemaking can be fully appreciated.

THE DECISION

After careful deliberation, I have decided for the reasons set forth below to permit British Airways and Air France to conduct limited scheduled commercial flights into the United States for a trial period not to exceed 16 months under limitations and restrictions set forth below. I am thus directing the Federal Aviation Administrator, subject to any additional requirements he would impose for safety reasons or other concerns within his jurisdiction, to order provisional amendment of the operations specifications of British Airways and Air France to permit those carriers, for a period of no longer than 16 months from the commencement of commercial service, to conduct up to two Concorde flights per day into JFK by each carrier, and one Concorde flight per day into Dulles by each carrier. These amendments may be revoked at any time upon four months' notice, or immediately in the event of an emergency deemed harmful to the health, welfare or safety of the American people. The following additional terms and conditions shall also apply:

1. No flight may be scheduled for landing or take-off in the United States before 7 a.m. local time or after 10 p.m. local time.

2. Except where weather or other temporary emergency conditions dictate otherwise, the flights of British Airways must originate from Heathrow Airport and those of Air France must originate from Charles de Gaulle Airport.

3. Authorization of any commercial flights in addition to those specificially permitted by this action shall constitute a new major federal action within the terms of NEPA and therefore require a new Environmental Impact Statement. (A footnote indicates that "it is not contemplated that another EIS would be required to permit continuation beyond 16 months of the six flights for which provisional permission is now being granted.)

4. In accordance with FAA regulations (14 CFR 91.55), the Concorde may not fly at supersonic speed over the United States or any of its territories.

5. The FAA is authorized to impose such additional noise abatement procedures as are safe, technologically feasible, economically justified, and necessary to minimize the noise impact, including, but not limited to, the thrust cut-back on departure.

I am also directing the FAA, subject to Office of Management and Budget clearance and Congressional authorization, to proceed with a proposed High Altitude Pollution Program (HAPP), to produce the data base necessary for the development of national and international regulation of aircraft operations in the stratosphere.

I herewith order the FAA to set up monitoring systems at JFK and Dulles to measure noise and emission levels and to report the result thereof to the Secretary of Transportation on a monthly basis. These reports will be made public within 10 days of receipt.

I shall also request the President to instruct the Secretary of State to enter into immediate negotiations with France and Great Britain so that an agreement that will establish a monitoring system for measuring ozone levels in the stratosphere can be concluded among the three countries within three months. The data obtained from such monitoring shall be made public at least every six months. I shall also request the Secretary of State to initiate discussions through ICAO and the World Meteorological Organization on the development of international stratospheric standards for the SST.

The Concorde monitoring reports and the summary report have been docketed and otherwise made available to the pub-

lic. This comprehensive monitoring effort included the measurement of noise and emissions at Dulles and in the surrounding communities, sonic booms along the east coast of the United States near the planned Concorde flight tracks, low-frequency noise-induced structural vibration of buildings near Dulles, and local community response to the Concorde.

III. CONTINUED OPERATIONS AT DULLES AND JFK

A. *Dulles.* By the terms of the FAA operations specification issued to British Airways and Air France in April 1976, the sixteen month demonstration period at Dulles Airport ended September 24. After Secretary Adams announced this proposed rule on September 23, the two carriers were issued amendments to their operations specifications to permit the same number of Concorde operations (one flight per day per carrier) to continue pending promulgation of a final noise rule.

Monthly reports were issued through the first twelve months of flights; the remaining four months were used to assemble the data into a final report. The monitoring confirmed the FAA's predictions: The Concorde in takeoff is about twice as loud as the noisiest subsonic airplanes (B-707s and DC-8s), and on approach about as loud as the noisiest subsonics. Concorde noise levels measured at standard Part 36 takeoff and approach noise measuring points are in excess of the Stage 2 standards applicable to newly manufactured subsonic jets. During the demonstration, the Concorde operators showed that the Concorde is capable of precision operations maneuvers, such as the decelerating approach, that help reduce its noise impact. In 12 months, the Concorde generated 1387 telephone complaints from airport neighbors, an average of 2.25 per flight, about twenty percent of which came from eight families, and about eight percent of which came from one family. Nearly all of the complaints reflected actual flights, and they were most numerous when atmospheric conditions or unusual flight patterns did indeed cause greater noise impacts than normal.

Structural vibration was also monitored by the National Aeronautics and Space Administration. Vibration levels of windows, walls and floors were measured for both subsonic and Concorde operations. Vibration induced by Concorde was higher than for subsonic airplanes, while well below criteria levels for building damage and less than levels caused by common household events such as door and window closings.

Air pollution monitoring demonstrated that Concorde emissions were greater than those of subsonic airplanes, but were less than anticipated and were not cause for concern. Concorde emissions at Dulles dissipate to background levels less than two thousand feet from the airplane, long before reaching populated locations.

On August 25, 1977, British Airways and Air France applied to the FAA to continue their present levels of operations at Dulles. Because the relatively limited impacts of the Concorde operations at Dulles have been no greater than had originally been anticipated, the question of continuing operations there can be addressed in the context of this rule making. Under these circumstances, the Administrative Procedures Act at 5 U.S.C. 558 provides a basic policy on the renewal of licenses:

> • • • When [a] licensee has made timely and sufficient application for a renewal or a new license in accordance with agency rules, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency.

In accordance with customary licensing practice and in the absence of environmental consequences severe enough to warrant a contrary result, we have therefore permitted the two carriers operating Concorde each to continue up to one flight per day at Dulles, at least until the promulgation of a final rule pursuant to this rulemaking.

The complete Concorde Monitoring Summary Report is available from the FAA Office of Environmental Quality (AEQ-220), Federal Aviation Administration, 800 Independence Ave. SW., Washington, D.C. 20591, telephone (202) 426-3396. It will be incorporated in the docket for this rule making. Specific comments with respect to the Dulles demonstration flights are invited.

B. *Kennedy.* DOT continues to support a demonstration at JFK. However, neither the 1976 authorization of demonstration flights nor the rules proposed in this NPRM would in any way affect the long established rights of airport proprietors to limit airplane noise at their airports in a manner which is not unjustly discriminatory and not unduly burdensome on commerce. This was recognized by the United States Court of Appeals for the Second Circuit in its two recent decisions in *British Airways Board v. Port Authority*, litigation to compel the Port Authority to permit commercial service with the Concorde at Kennedy International Airport.

The original authorization to conduct a 16-month demonstration of up to two flights per day at JFK by both Air France and British Airways provided that the demonstration period at that airport begins when flights of either carrier begin at New York. If the Concorde does in fact begin serving there, the FAA will monitor Concorde noise levels in New York as it has at Dulles. Any information developed there will be relevant and useful in resolving this rulemaking. The 16-month New York authorization has accordingly been left in effect, until the final promulgation of a rule. This NPRM and related decisions should, therefore, not be an issue in any further New York litigation.

IV. CONSIDERATIONS UNDERLYING THE PROPOSED RULE

A. *General.* This NPRM is issued following FAA review of the noise impact data in the draft environmental impact statement prepared in relation to this notice, and review of the year of monitoring Concorde arrivals and departures at Dulles. As discussed above, the Dulles demonstration confirmed that the noise impact of the Concorde is in excess of the noise impact of subsonic jets, as expected.

Because of the greater impact of Concorde noise levels, the FAA believes that its noise must be limited and controlled. As noted in the 1976 decision that provided federal authorization for the Concorde demonstrations at Dulles and JFK, noise regulatory proposals concerning SSTs must be subjected to a carefully considered weighing of domestic and international interests. The factors which must be considered here include:

1. The potential environmental impacts of the Concorde, including its air quality, climatic, ozone layer, noise and vibration and energy consumption impacts.
2. The need to maintain, to the maximum extent possible, the trend of reduced noise exposure around the nation's airports.
3. The economic and technical considerations that determine whether the proposed regulatory measuers would produce discriminatory or other unfair burdens on international aviation.
4. The need to assure that U.S. regulatory measures affecting foreign airplanes are equitable in light of the treatment that has been afforded by foreign governments to airplanes manufactured in the United States.
5. The benefits that will result from SSTs with respect to improved international travel and communication, technological advances in aviation, and improved international relations.
6. The need to assure that domestic and foreign airplanes are treated equally by the United States, and the need to assure that the same type of treatment that has been afforded by the United States to subsonic airplanes is afforded to SSTs.
7. The need to develop regulatory measures that do not infringe upon the existing legal authority of airport proprietors to regulate noise at their airports in a non-discriminatory manner.

If, in taking all of these factors into account, it is decided to permit SSTs to operate in the United States, two additional considerations are relevant. The first consideration in that to the extent the noise impact can be reduced by operating restrictions, they should be imposed to do so. Second, the noise impact of current generation Concordes should not be increased by modification of the airplane.

Considering these factors, FAA is proposing a regulatory approach that will minimize the environmental impact of supersonic air transporation, preserve its significant benefits, and avoid unreasonable economic impact. Comments focusing on the relationships between noise regulatory decisions, international aviation relations and obligations, and other economic and technological aspects of the certification and operation of SSTs will be most helpful in the development of the final FAA response to the EPA proposals in Notice Nos. 75-15 and 76-1,

and in determining the optimal regulatory solution to the problems presented in this NPRM.

B. *New Design SSTs.* With respect to future design SSTs, the FAA has concluded that it does not have adequate technical information to use as a basis for establishing a new type certification standard at this time. No new design SSTs are now on the drawing boards, and research necessary to develop an environmentally acceptable supersonic engine is to our knowledge proceeding very slowly. It is, therefore, highly unlikely that the technology of new SST engines will be known for several years. The FAA will monitor this research closely, and will develop appropriate standards as soon as there is sufficient technological information. No SST other than the Concorde will be type-certificated until a new noise rule is developed. In addition, the United States will press in the Committee on Aircraft Noise at the International Civil Aviation Organization for the development of an international noise standard for future design SSTs.

The FAA's goal is not to certificate or permit to operate in the United States any future design SST that does not meet standards then applicable to subsonic airplanes. If it is technologically infeasible to produce such an airplane and there is an application for a type certificate, the FAA will consider setting a standard less stringent that existing subsonic rules (Stage 3 or beter). Accordingly, in order to protect the public health and welfare, it is the FAA's intention not to permit operations in the United States of any future design SST unless the airplane utilizes the latest noise reduction technology which, at a minimum, will enable these airplanes to meet Stage 2 noise levels. Further, it is the FAA's intention to develop, consistent with § 611, noise certification standards for future design SST's that incorporate the maximum possible noise reduction technology but in no event allow noise levels to exceed Stage 2. Potential SST developers are advised the FAA will work toward SST noise requirements stricter than Stage 2 and, when such requirements are developed, they will be applied to future design SST's.

C. *Concorde.* These proposed rules would not require the Concordes with flight time before January 1, 1980, to satisfy the Stage 2 noise limits of Part 36 in order to obtain a U.S. type certificate. In relation to subsonic airplanes, deference has been shown for the long lead times required to develop a new type of airplane. The B–707s and DC–8s, manufactured before the promulgation of airplane noise rules, were initially "grandfathered" under our subsonic noise rules, and were not subject to those rules until 1974, when a manufacturing cutoff date was established to require newly manufactured B–707s and DC–8s to meet Stage 2 Part 36 requirements. Consistent with this treatment of subsonics, the rationale for the 1976 decision authorizing a limited number of Concorde demonstration flights is now a valid basis for permitting the first few Concordes to operate in the U.S. without meeting the Stage 2 standards:

> In order to design the aircraft, the British and French had to choose an engine and then design the aircraft around that engine's capabilities. Thus, the engine itself was a fixed quantity very early in the design process and attempts to reduce the engine's noise levels without unacceptable reductions in thrust were unsuccessful. The manufacturers of the Concorde would be unable to modify the engine or redesign the Concorde to meet restrictive noise levels. Since the Concorde is the only aircraft for which application to land has been made, and, therefore, to which a noise regulation might currently apply, the promulgation of such a rule, insofar as it had present applicability, would have been nothing more than a decision to grant or deny the Concorde the right to operate into the United States * * *

The 1976 decision also stated:

> The statutes and historical pattern of aircraft noise regulation, and indeed of most environmental regulations in this country, demonstrate that the promulgation of noise standards has closely followed the development of feasible technology to control noise. FAR 36 was promulgated over a decade after the advent of commercial jet aviation, and 80 percent of the planes in service today still do not satisfy its standard. The regulation was initially written to exempt temporarily aircraft certificated before 1969, which could not comply, and was amended to cover new versions of those aircraft only after the technology became available. The Federal Aviation Act specifically requires the Administrator of the FAA to consider technological feasibility in promulgating regulations. All feasible steps have been taken to control the Concorde noise, and it cannot be modified further to abate the noise levels.

In order to assure that "grandfathered" subsonic airplanes were not modified in a manner that would increase their noise levels, the "acoustical change" provisions of Part 36 were promulgated. These provisions preclude the FAA approval of type design changes which (1) increase the noise levels of "grandfathered" subsonic airplanes; or

(2) Increase the noise of complying airplanes above the Stage 2 limits. In analogous fashion, a revision to Part 36 is proposed which would extend this "acoustical change" provision to initially "grandfathered" Concordes. In addition, in order to extend the coverage to foreign registered airplanes which would not require a U.S. type certificate or U.S. type design change approval, a revision to Part 91 is proposed which would provide that no SST which does not meet the Stage 2 noise limits of Part 36 would be permitted to operate into a U.S. airport if it had a modification which increased its noise levels. This coverage reflects the policy decision that the factor of nationality should not create the right to increase noise through the further modification of SSTs that are already noisier than the Part 36 noise limits.

As noise suppression technology advanced, Part 36 was modified to provide that no U.S. standard airworthiness certificate would be granted after December 31, 1974, for subsonic turbojet airplanes if the airplane did not meet the Stage 2 noise limits of Part 36, even though initially "grandfathered" by having been type certificated prior to the effective date of Part 36. In similar fashion, the proposed rules would establish January 1, 1980, as the compliance date in Part 36 for Concordes. This cutoff would be complemented by an operational prohibition in Part 91 which would preclude the operation into a U.S. airport of any SST, domestic or foreign, which does not comply with the Stage 2 noise limits of Part 36, with the exception of Concordes with flight time before January 1, 1980.

Thus, this would limit the noise impact of SSTs by permitting operation in the United States only of Concordes that have flight time before January 1, 1980, but by no other SST, foreign or domestic, which does not comply with the Stage 2 noise limits of Part 36. This proposal is intended to continue for SSTs the longstanding policy of equal treatment of all airplanes in international and domestic operations.

For purposes of this NPRM, the most important international agreements are the Convention on International Civil Aviation (Chicago Convention) which was negotiated in 1944, and the bilateral air transport agreements with the United Kingdom and France.

Chicago Convention. The Chicago Convention is concerned with ensuring the safety of international travel, through both the safety of the airplane itself and the safety of the ground navigational and air traffic control systems. The Chicago Convention also established the International Civil Aviation Organization (ICAO), with multiple functions relating to the facilitation of international air travel.

Under the Chicago Convention, the airplanes of each contracting state that have been certificated by that state as being airworthy are permitted to conduct non-scheduled, non-revenue flights into the territory of any other contracting state without obtaining prior permission. Thus, the United Kingdom and France have treaty rights to conduct such Concorde flights in the United States. However, under the Convention, no commercial service by a foreign carrier may be operated into any nation without the express permission of that nation.

Under article 37 of the Chicago Convention, ICAO may promulgate international standards on a wide variety of subjects, including airworthiness of airplanes. Nations which agree to be bound by those standards must then accept them as definitive regulations with respect to the airworthiness of airplanes in international service. In the absence of action by ICAO, the participating nations may establish appropriate airworthiness standards unilaterally. ICAO has not promulgated international noise standards for SSTs. With respect to operations, such international airworthiness standards, when established, would not preclude any country from regulating the operations of the Concorde for environmental reasons.

Bilateral Agreements. Article II(b) of the bilateral air services agreement between the United States and France contains the following provision:

• • • [t]he designated air carrier or carriers may be required to satisfy the aeronautical authorities of the Contracting Party granting the rights that it or they is or are qualified to fulfill the conditions prescribed by or under the laws and regulations normally applied to those authorities to the operations of commercial air carriers.

In addition, Article 4 of the July 23, 1977, bilateral agreement between the United States and the United Kingdom ("Bermuda 2"), in language similar to that found in the bilateral with France and the Chicago Convention, provides that:

• • • [t]he laws and regulations of one Contracting Party relating to admission to or departure from its territory of aircraft engaged in international air navigation, or to the operation and navigation of such aircraft while within its territory, shall be applied to the aircraft of the airline or airlines designated by the other Contracting Party and shall be complied with by such aircraft upon entrance into or departure from and while within the territory of the first contracting Party.

These provisions of the international agreements provide the United States the authority to establish uniform, nondiscriminatory rules of the type proposed in this NPRM in relation to the Concorde, if unrestricted permission to operate would be inconsistent with the policies expressed in the environmental laws of the United States.

These international agreements are the principal ones that affect our actions with respect to the Concorde. They are entirely a matter of public record; no other bilateral or multilateral agreements exist that have any bearing on this rulemaking or the rights of airport proprietors to regulate operations at their airports.

Pursuant to these agreements, the Civil Aeronautics Board has certain authority, subject to the President's approval, to regulate foreign air carriers and in appropriate circumstances to suspend, reject or cancel unreasonable or discriminatory fares in foreign air transportation; and the FAA has authority to regulate aspects of aircraft operations that relate to safety.

D. *Other Restrictions.* Inasmuch as the rule as presently proposed would initially "grandfather" all Concordes with flight time before January 1, 1980, certain limitations are deemed appropriate to reduce the potential noise impact of these SSTs.

1. *Airport Proprietor Approval.* As noted above, the rules proposed here would not affect the existing legal authority of local airport proprietors to issue noise-related airport use restrictions that are not unjustly discriminatory and that do not impose an undue burden on air commerce.

The proposed rules would not determine the right of any Concorde operator to fly to a particular airport. American airports other than Dulles and Washington National are operated by authorities independent of the Federal government, usually state or local governmental agencies. While the Congress has the power under the commerce clause of the Constitution to regulate the operations of such airports, it has chosen not to do so. This Congressional policy leaves airport proprietors responsible for the regulation of their airports for noise abatement purposes. The proprietors may limit or prohibit flights by particular airplanes, subject to the general Constitutional restrictions that their regulations are not unjustly discriminatory and do not impose an undue burden on interstate or foreign commerce. The Chicago Convention and bilateral air services agreements do not alter this basic feature of American aviation law.

This legal principle has most recently been upheld by the United States Court of Appeals for the Second Circuit in *British Airways Board* vs. *Port Authority*. In its second opinion on the matter (No. 287, September 29, 1977), the court reiterated:

Our initial opinion in this case delineated the extremely limited role Congress had reserved for airport proprietors in our system of aviation management. Common sense, of course, required that exclusive control of airspace allocation be concentrated at the national level, and communities were therefore preempted from attempting to regulate planes in flight. See *Allegheny Airlines* vs. *Village of Cedarhurst*, 233 F. 2d 812 (22d Cir. 1958); *American Airlines* vs. *Town of Hempstead*, 398 F. 2d 369 (2d Cir.), *cert. denied*, 393 U.S. 1017 (1969). The task of protecting the local population from airport noise, however, has fallen to the agency, usually of local government, that owns and operates the airfield. *Air Transport Ass.* vs. *Crotti*, 389 F. Supp. 58 (N.D. Cal. 1975) (three-judge court); *National Aviation* vs. *City of Hayward*, 418 F. Supp. 417 (N.D. Cal. 1976). It seemed fair to assume that the proprietor's intimate knowledge of local conditions, as well as his ability to acquire property and air easements and assure compatible land use, *cf. Griggs* vs. *Allegheny County*, 369 U.S. 84 (1962), would result in a rational weighing of the costs and benefits of proposed service. Congress has consistently reaffirmed its commitment to this two-tiered scheme, and both the Supreme Court and executive branch have recognized the important role of the airport proprietor in developing noise abatement programs consonant with local conditions.

FAA consideration of authorization of Concorde flights to particular airports will include environmental assessments for each airport. However, for the Concorde operations covered in the final environmental impact statement (EIS) for this proposed regulatory action, further environmental assessment under NEPA should not be necessary. Therefore, the public is specifically invited to review closely the airports, and numbers of Concorde flights at each airport, that are assessed in the draft EIS for this NPRM.

2. *Curfew.* In view of the greater single-event noise impact of the Concorde, a curfew on SST operations is proposed that would prohibit the scheduling of operations at any U.S. airport between 10 p.m. and 7 a.m. local time. Review of the noise data developed for the draft EIS for this notice indicates that the community impact of night SST operations can be much greater than the impact of operations during the daylight hours.

3. *Operational Compliance Date.* As noise suppression technology advanced, Part 91 was modified to provide that no subsonic transport category turbojet weighing more than 75,000 pounds may operate in domestic commerce in the United States after January 1, 1985, unless it meets the Stage 2 limits of Part 36, irrespective of whether it was initially "grandfathered" by having been type certificated before 1969 or manufactured before 1974. In addition, the intent was expressed in the preamble of Amendment 91-136 to impose the same requirement on subsonic airplanes in foreign air commerce in the United States if ICAO standards are not developed. In parallel fashion, such an operational compliance date, while not presently proposed, would be considered for the "grandfathered" Concordes with flight time before January 1, 1980, when technologically practicable and economically reasonable, and in close concert with international processes through ICAO.

E. *Evaluation of Impacts.* As noted in the introduction to this notice, the final evaluation of the potential impacts of this NPRM will be accomplished as part of FAA's disposition of the EPA proposals contained in Notice Nos. 75-15 and 76-1. However, the assessment required by the regulatory reform procedures set forth in the Secretary's "Policies to Improve Analysis and Review of Regulations", issued on April 11, 1976, and published in the FEDERAL REGISTER (41 FR 16200) on April 16, 1976, has been conducted for this NPRM. These policies require development and analysis of the costs and benefits of rulemaking. This analysis indicates that the proposals in this NPRM would not, if adopted, significantly increase costs to the private sector, to consumers, or to Federal, State or local governments. However, the proposed rule is potentially controversial, primarily because of the anticipated environmental impact of the Concorde. Because of the sensitivity of this aspect of the proposals, a draft environmental impact statement has been prepared as stated above. It is available from the FAA Office of Environmental Quaity by writing to Federal Aviation Administration, Office of Environmental Quality (AEQ-210), 800 Independence Avenue, SW., Washington, D.C. 20591, or by telephoning (202) 426-3396.

SECTION-BY-SECTION ANALYSIS

It is proposed to amend provisions in three parts of the Federal Aviation Regulations—Part 21 (14 CFR Part 21), which contains the procedural requirements for the certification of aeronautical products; Part 36 (14 CFR Part 36), which contains the substantive noise limits and related noise measurement and test procedures that must be complied with for the issuance of type certificates and airworthiness certificates; and Part 91 (14 CFR Part 91), which sets

forth the flight and other requirements that apply to the operation of aircraft. The paragraphing of the following discussion corresponds to that of the description of proposed rule changes.

I. CHANGES TO PART 21 (14 CFR PART 21)

A. Section 21.93(b) (1) and (2) would be amended by deleting the word "subsonic." The effect of this amendment would be to make the definition of the term "acoustical change" equally applicable to supersonic and subsonic transport category and turbojet powered civil airplanes. Under this amendment, for both supersonic and subsonic airplanes, an "acoustical change" would exist whenever a voluntary change in the type design of airplane is applied for that may increase the noise levels of the airplane. Therefore, for both supersonic and subsonic airplanes, the acoustical change provisions of Part 36 (§ 36.7) would have to be complied with prior approval of that type design change. See also the discussion of the proposed change to § 36.7 below. Inasmuch as this procedural provision covers only airplanes for which type design approval is requested under U.S. rules (Part 21), this change is supplemented with proposed new § 91.309(b) (1), which would extend the "acoustical change" concept to supersonic airplanes operated in the United States that are not covered by U.S. type certification requirements.

B. Section 21.183(e)(1) would be amended by deleting the word "subsonic." The effect of this would be that, for supersonic as well as subsonic airplanes, a standard airworthiness certificate (which is the class of airworthiness certificate required for U.S. air carrier operation and similar operations) would not be issued for airplanes that have not had flight time before the dates specified in Part 36 (§ 36.1(d)), unless compliance with the noise standards in Part 36 is shown. See also the discussion of the proposed revision of § 36.1(d). This would extend to SSTs the rules applied to subsonic airplanes in Amendment 36-2—popularly called the "new production" rule), issued on October 19, 1973, and published in the FEDERAL REGISTER (38 FR 29569) on October 26, 1973.

II. CHANGES TO PART 36 (14 CFR PART 36)

A.1. Section 36.1 would be amended by adding a new subparagraph (a)(3) extending the applicability of Part 36 to cover the issuance of a type certificate, and changes to that type certificate, and the issuance of standard airworthiness certificates, for the Concorde airplane.

A.2. Section 36.1(d) would be amended by deleting the word "subsonic," in the lead-in, by adding the word "subsonic" to the current subparagraphs containing compliance dates, and by adding a new compliance date for Concorde airplanes. This would require Concordes without flight time before January 1, 1980, to comply with the Stage 2 noise limits of Part 36 in effect on the date of publication of this NPRM, in order to obtain an original standard airworthiness certificate. It is noted that the compliance dates in § 36.1(d) are related to "flight time." Part 1 of the Federal Aviation Regulations (14 CFR Part 1) defines "flight time" as the time for the moment the airplane first moves under its own power for the purpose of flight until the moment it comes to rest at the next point of landing. It is believed that the date of the first flight of an airplane is a clear basis for distinguishing which airplanes in a production series are subject to noise rules and which airplanes are not.

A.3. Section 36.1(f) would be amended by adding new definitions of "subsonic airplane" and "supersonic airplane." The dividing line between these classes would be Mach 1 in terms of the maximum operating limit speed, M_{mo} as defined in Part 1. Note that these definitions would apply wherever the terms "subsonic airplane" and "supersonic airplane" are used in Part 36, and also where they are used in Part 91 because of the proposed change to § 91.301(d), discussed below. Technical comments concerning the definitions of these terms are specifically requested.

B. The proposed amendment to paragraph (a) of § 36.2 is editorial in nature. It consolidates repetitious language. The purpose of that paragraph, simply stated, is to supersede § 21.17 of Part 21, with respect to the designation of applicable type certification regulations, wherever Part 36 imposes type certification requirements that apply to airplanes for which the application for a type certificate has already been submitted.

C. It is proposed to amend § 36.7 by deleting the term "subsonic." The effect of this change (and of the deletion of the term "subsonic" from § 21.93, discussed above) would be to apply to SSTs the same acoustical change rules that currently apply to subsonic airplanes. Note that, under § 36.7, different regulatory concepts apply, depending on whether the airplane is a "Stage 1 airplane," a "Stage 2 airplane," or a "Stage 3 airplane." Currently operating Concordes are "State 1 airplanes" since they have not been shown to comply with the noise limits for "Stage 2 airplanes" or "Stage 3 airplanes." The Stage 1 acoustical change provisions of § 36.7(c) provide that the airplane may not exceed the noise levels created prior to the change in type design. This proposal would bring Concordes under this rule.

D., E. and F. These proposals together make it clear that Subpart B of Part 36 (which requires transport category large airplanes and turbojet powered airplanes to comply with Appendices A and B of Part 36) covers supersonic as well as subsonic airplanes.

G. and H. These proposals make it clear that Subpart C of Part 36, as amended, would apply only to subsonic transport category large airplanes and subsonic turbojet powered airplanes.

I. A new Subpart D, applying to SSTs would be added to Part 36. In this new subpart, new § 36.301, Noise limits: Concorde airplanes, would be added, containing requirements for Concorde corresponding to those for the first subsonic airplanes covered by current § 36.201. Like § 36.201, new § 36.301(a) would require that compliance with the applicable noise limits must be shown, for Concorde airplanes, with noise levels measured and evaluated as prescribed in Subpart B of Part 36. This would have the effect of requiring compliance with the detailed noise measurement requirements in Appendix A of Part 36 and the detailed requirements in Appendix B concerning the evaluation of noise data received in accordance with Appendix A. Compliance would have to be demonstrated at the same measuring points (i.e., takeoff, sideline, and approach) as are required under Appendix C for subsonic airplanes. See § C36.3 of Appendix C.

Paragraph (b) of new § 36.301 would provide that, for the Concorde airplane, it must be shown in accordance with the provisions of Part 36 in effect on the publication date of this NPRM, that the noise levels of that airplane are reduced to the lowest levels that are "economically reasonable, technologically practicable, and appropriate to the particular type design." This standard corresponds to considerations prescribed by the Congress in section 611 of the Federal Aviation Act of 1958, as amended by the Noise Control Act of 1972.

J. It is proposed to delete the term "subsonic" from § 36.1581(c). The effect of this change would be to make it clear that, for both supersonic and subsonic transport category large airplanes and turbojet powered airplanes, weights used in complying with the takeoff or landing noise limits of Part 36, if less than the maximum weight or design landing weight, respectively, must be furnished as operating limitations.

K. The proposed changes to §§ C36.7 and C36.9 are intended to incorporate, for the Concorde noise test, the concept of "reference speed" which is the speed presently used, instead of stalling speed, in the takeoff and landing test requirements for that airplane.

III. CHANGES TO PART 91 (14 CFR PART 91)

These changes would modify the current sonic boom provisions of § 91.55, and the noise abatement provisions of Subpart E, *Operating Noise Limits*, which was adopted on December 17, 1976, and published in the FEDERAL REGISTER (41 FR 56046) on December 23, 1976. Subpart E currently contains rules that require subsonic turbojet airplanes weighing more than 75,000 pounds to comply with Part 36, in accordance with a phased schedule ending on January 1, 1985.

A. and B. The proposed changes to §§ 9.1b(3) and 91.55 are intended to protect the coastal areas of the United States from sonic boom. The current rule prohibits the creation of sonic boom by civil airplanes that are in the United States by prohibiting flight in excess of Mach 1 while the airplane is within U.S. territorial limits. However, in relation to airplanes approved for operation to U.S. airports from outside the United

States, the current rule does not specifically address the problem of a sonic boom created by an airplane which is outside the United States but reaching the surface within the United States. This problem exists because the shock wave generated by supersonic flight can extend many miles from the airplane. In recognition of this phenomenon, the FAA established sonic boom recorders along the east coast of the United States to monitor Concorde sonic booms. Recorders were placed at Coast Guard Stations nearest the planned Concorde flight track, i.e., Nantucket Island, Massachusetts; Shark River, New Jersey; and Cape May, New Jersey. While no pattern of sonic boom was experienced, one sonic boom, with no reported community reaction, was recorded the Shark River station. It is estimated that the arriving airplane was 19 miles from the New Jersey coast. Since the airplane was not in the United States, no violation of § 91.55 was involved. The operator, however, changed its flight limitations to ensure that supersonic speed is not attained or maintained closer than 25 miles from the coast. If the number of supersonic operators requesting approval to operate to or from U.S. airports increases, the need for positive requirements to prevent a repetition of the Shark River sonic boom appears evident. It is, therefore, proposed to add a new § 91.55(b) conditioning approval to operate to or from U.S. airports upon compliance with limitations like those voluntarily adopted by the aircraft operator following the Shark River sonic boom.

The proposal would require that information available to the flight crew include flight limitations that ensure that no sonic boom on the surface in U.S. territory will result from flights entering and leaving the United States. The operator would be required to comply with these limitations unless other limitations are issued to the operator in an authorization to exceed Mach 1 under Appendix B of Part 91. These authorizations are issued in the rare cases specified in that Appendix, for specific operations in designated flight test areas (such as flight testing of supersonic airplanes).

C. The proposed amendment of § 91.301 (a) would reflect the expansion of Subpart E of Part 91 to include SSTs. Subpart E—Operating Noise Limits, contains phased noise limits for subsonic turbojet airplanes, leading to full fleet compliance with Part 36 by January 1, 1985.

The proposed revision of § 91.301(a) is drafted to highlight the different scopes of each section in the revised subpart. Proposed § 91.301(a)(1) would make it clear that current §§ 91.303 through 91.307 would be limited to subsonic airplanes and to U.S. registered airplanes. No substantive change to §§ 91.303 through 91.307 is proposed in this notice.

Proposed § 91.301(a)(2) would provide that the newly proposed operating restrictions in § 91.309, for SSTs that do not comply with Part 36, would apply to U.S. registered airplanes having standard airworthiness certificates, and foreign registered airplanes that would be required to have standard airworthiness certificates if they were registered in the United States. It would cover operations under Parts 91, 121, 123, 129, and 135.

D. This proposal would incorporate the Part 36 definitions of 'subsonic airplane' and 'supersonic airplane' in Subpart E of Part 91. Here also, public comment on the impact of those definitions (as discussed above) on all operators subject to Part 91 is requested.

E. and F. The proposed revisions of §§ 91.303 and 91.305 would make it clear that the current dates for phased and final compliance with Part 36, ending on January 1, 1985, apply only to subsonic airplanes. See proposed § 91.311 for application of Part 36 to Concordes.

G. A new § 91.309 would be added, containing operating rules that would apply to SSTs that operate to or from a U.S. airport but have not been shown to comply with the Stage 2 noise limits of Part 36 in effect on the publication date of this NPRM. Note that use of the trade-off provisions of Part 36 would be allowed. This section would apply equally to U.S. registered and foreign registered airplanes.

Proposed § 91.309(b) would prescribe the operational restrictions intended to protect airport environments from unnecessary SST noise. Proposed § 91.309 (b)(1) would require that no person may land or take off an airplane covered by the section if its noise has been increased through modification of the type design of the airplane. This operational counterpart of the acoustical change provisions of § 36.7 of Part 36 (see above discussion) is proposed because the acoustical change provisions of Part 36 (and Part 21) apply only to U.S. type certificated airplanes for which a type design change approval is requested under U.S. regulations. However, those certification rules do not cover foreign airplanes, for which a type design change approval by the FAA is not required or requested. These airplanes may, nevertheless, be "grown" or otherwise modified under the laws of other countries. The words "regardless of whether a type design change approval is applied for under Part 21 of this chapter" would extend the acoustical change concept to the operation of airplanes not covered by U.S. certification rules.

Proposed § 91.309(b)(2) would provide that no flight may be scheduled, or otherwise planned, for takeoff or landing at any U.S. airport after 10 p.m. and before 7 a.m., local time.

H. Proposed § 91.311 would provide that, except for Concorde airplanes having flight time before January 1, 1980, no SST maybe operated in the U.S. that does not comply with the Stage 2 noise limits of Part 36 in effect on the publication date of this NPRM.

Drafting Information

The principal authors of this document are Richard Tedrick, Office of Environmental Quality, and Richard Danforth, Office of the Chief Counsel.

Proposed Rule

In consideration of the foregoing, the FAA, hereby supplements the proposals in Notices 75–15 and 76–1 with the following proposals to amend Title 14 of the Code of Federal Regulations:

PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS AND PARTS

I. Part 21 of the Federal Aviation Regulations (14 CFR Part 21) would be amended as follows:

§ 21.93 [Amended]

A. By amending § 21.93(b)(1) and (2) by deleting the word "subsonic" wherever it appears.

§ 21.183 [Amended]

B. By amending § 21.183(e)(1) by deleting the word "subsonic" wherever it appears.

PART 36—NOISE STANDARDS; AIRCRAFT TYPE AND AIRWORTHINESS CERTIFICATION

II. Part 36 of the Federal Aviation Regulations (14 CFR Part 36) would be amended as follows:

§ 36.1 [Amended]

1. By adding a new § 36.1(a)(3) to read as follows:

(a) * * *

(3) A type certificate and changes to that certificate, and standard airworthiness certificates, for Concorde airplanes.

2. By amending § 36.1(d) to read as follows:

* * * * *

(d) Each person who applies for the original issue of a standard airworthiness certificate for a transport category large airplane or for a turbojet powered airplane under § 21.183 must, regardless of date of application, show compliance with the following provisions of this part (including Appendix C)

(1) Part 36 as effective on December 1, 1969, for subsonic airplanes that have not had any flight time before—

(i) December 1, 1973, for airplanes with maximum weights greater than 75,000 lbs., except for airplanes that are powered by Pratt and Whitney Turbo Wasp JT3D series engines;

(ii) December 31, 1974, for airplanes with maximum weights greater than 75,000 lbs. and that are powered by Pratt and Whitney Turbo Wasp JT3D series engines;

(iii) December 31, 1974, for airplanes with maximum weights of 75,000 lbs. and less; and

(2) The Stage 2 noise limits of Part 36 as effective on (the publication date of this NPRM) for Concorde airplanes that have not had flight time before January 1, 1980.

3. By amending § 36.1(f) by adding new paragraphs (7) and (8) to read as follows:

* * * * *

(f) * * *

(7) A "subsonic airplane" means an airplane for which the maximum operating limit speed, M_{mo}, does not exceed a Mach number of 1.

(8) A "supersonic airplane" means an airplane for which the maximum operating limit speed M_{mo}, exceeds a Mach number of 1.

* * * * *

B. By amending paragraph (a) of § 36.2 to read as follows:

§ 36.2 Special retroactive requirements.

(a) Notwithstanding § 21.17 of this chapter, and irrespective of the date of application, each person who applies for a type certificate for an aircraft covered by this part must show compliance with the applicable provisions of this part.

* * * * *

§ 36.7 [Amended]

C. By amending the section heading and paragraph (a) of § 36.7 by deleting the word "subsonic" wherever it appears.

D. By amending the heading of Subpart B to read as follows:

Subpart B—Noise Measurement and Evaluation for Transport Category Large Airplanes and Turbojet Powered Airplanes

§ 36.101 [Amended]

E. By amending § 36.101 by inserting the words "for transport category large airplanes and turbojet powered airplanes" before the words "the noise generated * * *".

§ 36.103 [Amended]

F. By amending § 36.103 by inserting the words "for transport category large airplanes and turbojet powered airplanes," before the words "noise measurement information * * *".

G. By amending the heading of Subpart C to read as follows:

Subpart C—Noise Limits for Subsonic Transport Category Large Airplanes and Subsonic Turbojet Powered Airplanes

§ 36.201 [Amended]

H. By amending paragraph (a) of § 36.201 by inserting the words "for subsonic transport category large airplanes and subsonic turbojet powered airplanes" before the words "compliance with * * *".

I. By adding a new Subpart D to read as follows:

Subpart D—Supersonic Transport Category Airplanes

§ 36.301 Noise limits: Concorde airplanes.

(a) *General.* For the Concorde airplane, compliance with this subpart must be shown with noise levels measured and evaluated as prescribed in Subpart B of this part, and demonstrated at the measuring points prescribed in Appendix C of this part.

(b) *Noise limits.* It must be shown in accordance with the provisions of this part in effect (on the publication date of this NPRM) that the noise levels of the airplane are reduced to the lowest levels that are economically reasonable, technologically practicable, and appropriate to the particular type design.

§ 36.1581 [Amended]

J. By amending paragraph (c) of § 36.1581 by deleting the word "subsonic" before the words "transport category * * *".

K. By amending Appendix C as follows:

1. By amending § C36.7(f)(1) by inserting the words "for subsonic airplanes" before the words "the test day conditions."

2. By redesignating § C36.7(f)(2) as § C36.7(f)(3).

3. By adding a new § C36.7(f)(2) to read as follows:

§ C36.7 *Takeoff test conditions.*

* * * * *

(f) * * *

(2) For Concorde airplanes, the test day speeds and the acoustic day reference speed must be the minimum approved value of V_2+35 knots, or the all-engines-operating speed at 35 feet whichever speed is greater as determined under the regulations constituting the type certification basis of the airplane, except that the reference speed must not exceed 250 knots. These tests must be conducted at the test day speeds ± 3 knots. Noise values measured at the test day speeds must be corrected to the acoustic day reference speed.

4. By amending § C36.9(f)(1) by inserting the words "for subsonic airplanes" before the word "a steady."

5. By redesignating § C36.9(f)(2) as § C36.9(f)(3).

6. By adding a new § C36.9(f)(2) to read as follows:

§ C36.9 *Approach test conditions.*

* * * * *

(f) * * *

(2) For Concorde airplanes a steady approach speed, that is either the landing reference speed +10 knots, or the speed used in establishing the approved landing distance under the airworthiness regulations constituting the type certification basis of the airplane, whichever speed is greater, must be established and maintained over the approach measuring point.

PART 91—GENERAL OPERATING AND FLIGHT RULES

III. Part 91 of the Federal Aviation Regulations (14 CFR Part 91) would be amended as follows:

§ 91.1 [Amended]

A. By amending § 91.1(b)(3) by deleting the reference to § 91.55 therefrom.

By amending § 91.55 by adding the words "in the United States" between the words "civil aircraft" and the words "at a", by designating the current text as paragraph (a), and by adding a new paragrph (b) to red as follows:

§ 91.55 Civil aircraft sonic boom.

* * * * *

(b) In addition, no person may operate a civil aircraft, capable of operating at a Mach number greater than 1, to or from an airport in the United States unless—

(1) Information available to the flight crew includes flight limitations that ensure that flights entering or leaving the United States will not cause a sonic boom to reach the surface within the United States; and

(2) He complies with the flight limitations prescribed in paragraph (b)(1) of this section or complies with conditions and limitations in an authorization to exceed Mach 1 issued to the operator under Appendix B of this Part.

C. By amending paragraph (a) of § 91.301 to read as follows:

§ 91.301 Applicability; relation to Part 36.

(a) This subpart prescribes operating noise limits and related requirements that apply, as follows, to the operation of aircraft in the United States:

(1) Sections 91.303, 91.305, and 91.307 apply to U.S. registered civil subsonic turbojet airplanes with maximum weights of more than 75,000 pounds and having standard airworthiness certificates. Those sections apply to operations under this part and under Parts 121, 123 and 135 of this chapter.

(2) Sections 91.309 and 91.311 apply to U.S. registered civil supersonic airplanes having standard airworthiness certificates, and foreign registered civil supersonic airplanes that, if registered in the United States, would be required by this chapter to have a U.S. standard airworthiness certificate in order to conduct the operations intended for the airplane. Those sections apply to operations under this part and under Parts 121, 123, 129 and 135 of this chapter.

§ 91.301 [Amended]

D. By adding the following new sentence at the end of paragraph (b) of § 91.301: "For the purpose of this subpart, the terms 'subsonic airplane' and 'supersonic airplane' have the meanings specified in Part 36 of this chapter."

§ 91.303 [Amended]

E. By amending § 91.303 by amending the section heading to read "Final compliance: subsonic airplanes" and by adding the word "subsonic" between the word "any" and the word "airplane."

§ 91.305 [Amended]

F. By amending § 91.305 by amending the section heading to read "Phased compliance under Parts 121 and 135: subsonic airplanes," and by adding the word "subsonic," in paragraph (a), between the word "operating" and the word "airplanes."

G. By adding a new § 91.309 to read as follows:

§ 91.309 Civil supersonic airplanes that do not comply with Part 36.

(a) *Applicability.* This section applies to civil supersonic airplanes that do not comply with the Stage 2 noise limits of Part 36, in effect on (the publication date of this NPRM), using applicable tradeoff provisions.

(b) *Airport use.* Except in an emergency, the following apply to each person who operates a civil supersonic air-

plane to or from an airport in the United States:

(1) Regardless of whether a type design change approval is applied for under Part 21 of this chapter, no person may land or take off an airplane, covered by this section, for which the type design is changed after (effective date of the final rule) in a manner constituting an "acoustical change" under § 21.93, unless the acoustical change requirements of Part 36 are complied with.

(2) No flight may be scheduled, or otherwise planned, for takeoff or landing after 10 p.m. and before 7 a.m. local time.

H. By adding a new § 91.311 to read as follows:

§ 91.311 Civil supersonic airplanes: Noise limits.

Except for Concorde airplanes having flight time before January 1, 1980, no person may operate a civil supersonic airplane that does not comply with the Stage 2 noise limits of Part 36 in effect on (publication date of this NPRM).

(Secs. 307, 313(a), 601(a), 603, 611, Federal Aviation Act of 1958, as amended (49 U.S.C. 1348, 1354(a), 1421(a), 1423, and 1431); sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)); Title I, National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); Executive Order 11514, March 5, 1970; 14 CFR 11.45.)

NOTE.—The Federal Aviation Administration has determined that this document does not contain a major proposal requiring the preparation of an Economic Impact Statement under Executive Order 11821, as amended by Executive Order 11949, and OMB Circular A-107.

Issued in Washington, D.C., on October 11, 1977.

CHARLES R. FOSTER,
Director, Office of Environmental Quality.

[FR Doc.77-29972 Filed 10-12-77;8:45 am]